CLAIMS

What is claimed is:

1   ~~SUB A1~~   1. A method for decoding compressed video comprising:

2   reading a stream of compressed video into a memory, said

3   video having multiple pictures, each picture having one or more

4   independent elements;

5   assigning, via a first processor of a group of processors sharing

6   said memory, at least one independent element per processor to be

7   decoded by the processors in parallel; and

8   decoding the independent elements of the video in parallel.

1   2. The method of claim 1, wherein the independent elements

2   include slices.

1   ~~SUB A2~~   3. The method of claim 2, wherein assigning the independent

2   elements includes assigning a varying number of slices to individual

3   processors.

1   4. The method of claim 3, wherein assigning the independent

2   elements includes assigning a comparable work load to the processors.

1   5. The method of claim 4, wherein assigning the independent

2   elements includes placing in memory as a local variable, for each

3   processor, the slices to be decoded by a respective processor.

1   6. The method of claim 5, wherein each slice includes at least one

2   macroblock.

1   7. The method of claim 6, wherein said video is encoded in MPEG.

1   8. The method of claim 7, wherein the method of decoding is

2   performed in real-time.

1   9. A computer-readable medium having stored thereon a set of

2   instructions, said set of instruction for decoding compressed video, which

3   when executed by a processor, cause said processor to perform a method

4   comprising:

5   reading a stream of compressed video into a memory, said

6   video having multiple pictures, each picture having one or more

7   independent elements;

8   assigning, via a first processor of a group of processors sharing

9   said memory, at least one independent element per processor to be

10   decoded by the processors in parallel; and

11   decoding the independent elements of the video in parallel.

1   10. The computer-readable medium of claim 9, wherein the

2   independent elements include slices.

1   SUBS   11. The computer-readable medium of claim 10, wherein assigning

2   the independent elements includes assigning a varying number of slices to

3   individual processors.

1   12. The computer-readable medium of claim 11, wherein assigning

2   the independent elements includes assigning a comparable work load to

3   the processors.

1   13. The computer-readable medium of claim 12, wherein assigning

2   the independent elements includes placing in memory as a local variable,

3   for each processor, the slices to be decoded by a respective processor.

1   14. The computer-readable medium of claim 13, wherein each slice

2   includes at least one macroblock.

1   15. The computer-readable medium of claim 14, wherein said

2   video is encoded in MPEG standard.

1   16. The computer-readable medium of claim 15, wherein the

2   method of decoding is performed in real-time.

1   17. A computer system comprising:

2   a plurality of processors ;

3   a memory coupled to said plurality of processors;

4   a first unit of logic to read a stream of compressed video into

5   said memory, said video having multiple pictures, with each picture

6   having one or more independent elements; and

7   said first unit of logic further assigns, via a first processor of

8   said group of processors sharing said memory, at least one independent

9   element per processor to be decoded by the processors in parallel.

1   18. The computer system of claim 17, wherein the independent

2   elements include slices.

1 SUBA(1)   19. The computer system of claim 18, wherein said first unit of

2   logic assigns a varying number of slices to individual processors.

1   20. The computer system of claim 19, wherein said first unit of

2   logic assigns a comparable work load to the processors.

1   21. The computer system of claim 20, wherein said first unit of

2   logic places in memory as a local variable, for each processor, the slices to

3   be decoded by a respective processor.

1   22. The computer system of claim 21, wherein each slice includes at

2   least one macroblock.

1   23. The computer system of claim 22, wherein said video is

2   encoded in MPEG standard.

1   24. The computer system of claim 23, wherein system computer

2   system decodes said video in real-time.